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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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Alexander M. Gerasimow
Allen-Bradley Company, LLC
1201 South Second Street
Milwaukee, WI 53204-2496

EXAMINER

COLON SANTANA, EDUARDO

ART UNIT PAPER NUMBER

2837

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------------------------|----------------------------------|--|
| Office Action Summary | Application No. 10/675,312 | Applicant(s) EL-IBIARY ET AL. | |
| | Examiner Eduardo Colon-Santana | Art Unit 2837 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 17-22, 27-31 and 34-36 is/are rejected.
- 7) ☒ Claim(s) 8-16, 23-26, 32 and 33 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>7/02/2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 7/2/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading.

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

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Content of Specification

- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

2. The disclosure is objected to because of the following informalities: "It does not include a section for the Summary of the Invention".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-7, 17-22, 27-31 and 34-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Unsworth et al. U.S. Patent No. 6,636,823.

Referring to claim 1, Unsworth et al. discloses a method and apparatus for a motor fault diagnosis (see all figures and respective portions of the specification). Unsworth et al. further describes in figure 1 an apparatus for establishing at least one operating parameter (voltage or current) of a multiphase motor (12), wherein a programming instruction stored in a tangible medium (not shown) but inherent in the product structure of figure 1, includes a processor (18), operable to receive data from the motor (12) and process the data in response to the programming instructions. Furthermore, Unsworth et al. describes a series of steps implemented by the processor in figures 2 and 3, in which motor electrical input data is received and represented in a balanced set of phasors¹ with a positive sequence and negative sequence (36), therefore establishing a motor output power (40). (See in addition, Col. 3, lines 18-31; Col. 4-5).

As to claim 2, see figure 2, which depicts establishing a positive and negative sequence motor output power (42) from the calculated balanced positive sequence (36).

Referring to claim 3, see Col. 5, which shows the calculation of motor output power in terms of positive and negative sequence.

As to claim 4, Unsworth et al. describes calculating averages power in which efficiency would naturally be established after the output power is calculated and compared with input power from power supply (13).

Referring to claims 5-7, Unsworth et al. describes the input data including input current and input voltage (see figure 2, item 34),

¹ A complex number representing the amplitude and phase of a sinusoidal function.

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input power can be derive by well-known formulas using voltage and current. Furthermore, Unsworth et al. mentions that the balanced set of phasors with a positive sequence can be represented by current and/or voltage (see figure 2 and Col. 5, lines 53-55).

As to claims 17 and 27-29, the method steps and the means for are inherent in the product structure of claim 1 above, in which Unsworth et al. discloses obtaining stator electrical input data and decomposing (deriving) the stator electrical input data into a balanced set of phasors with a positive and negative sequence. To establish a first and second output of the motor, Unsworth et al. calculates a negative and positive sequence based on the reactive and active parts of the sequence components respectively. In addition, efficiency is naturally established after the output power is calculated and compared with input power from the power supply (13) (see Abstract, Col. 6-10 and figures 2-4).

Referring to claims 18-21, Unsworth et al. discloses obtaining stator electrical input data and decomposing (deriving) the stator electrical input data into a balanced set of phasors with a positive and negative sequence. In addition, efficiency is naturally established after the output power is calculated and compared with input power from the power supply (13) (see Abstract, Col. 6-10 and figures 2-4).

As to claim 22, Unsworth et al. establishes a first and second output of the motor, calculating a negative and positive sequence based on the reactive and active parts of the positive and negative sequence components respectively (see Col. 5-7).

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Referring to claims 30, 31 and 34-36, a computer program is inherent in the product structures of claims 1, 2 and 27 as discussed above. Figures 1 and 2 depicts a processor (18) including memory (20) and method steps (36-46), which are achieved by programming instructions that execute the functions described above related to decomposing electrical data into positive and negative sequence and establishing the efficiency of the motor by calculating the average output power. (See Col. 6, lines 19-27, describing methods of symmetrical components).

Allowable Subject Matter

4. Claims 8, 23-26 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if incorporated in the independent claim from which it depends including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record in form 892 and not specifically relied upon is considered pertinent to applicant's disclosure to further show the state of the art.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eduardo Colon-Santana whose telephone number is (571) 272-2060. The examiner can normally be reached on Monday thru Thursday 6:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Martin can be reached on (571) 272-2800 X.37. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ECS
April 8, 2005



MARLON T. FLETCHER
PRIMARY EXAMINER